

This invention includes a method of integrating into a semiconductor specimen fabrication station a process diagnostic module that performs on the semiconductor specimen a processing operation that otherwise would not be performed by the processing components to thereby make the fabrication station more efficient and flexible to use. The process diagnostic module includes, for example, a specimen parameter measurement system or a specimen inspection system and is configured to mount on a front-opening interface mechanical standard (FIMS) load port and fits within the allowable spatial envelope. This invention further includes located external to the semiconductor specimen fabrication station a processor that receives and processes data acquired by the process diagnostic module during its operation.

[illegible]